

Engine," which was from his pen, was published by Messrs. Griffin and Co. He also translated Diesel's work, "The Theory and Construction of the Rational Heat Motor." During the whole of his career he was constantly engaged in experiments of various kinds, one of the principal series being the tests he made, in conjunction with Prof. Kennedy, on the steam boiler. In 1898 a work which he had written on the subject was published by Messrs. Griffin and Co.

Mr. Donkin was a member of the Institution of Civil Engineers, from which society he received the Watt medal and Telford and Manby premiums; a vice-president of the Institution of Mechanical Engineers, and a member of various other scientific and technical societies.

NOTES.

M. YERMOLOFF has been elected a correspondant of the Section of Rural Economy of the Paris Academy of Sciences, in succession to the late Sir J. B. Lawes.

IN connection with the survey of British lakes provided for by the Pullar Trust, Sir John Murray has rented Rannoch Lodge, standing at the west end of Loch Rannoch, from now until the commencement of the shooting season. In the first week of April the following gentlemen will join him and will be associated with him in the work, viz., Mr. R. M. Clark, Aberdeen, Mr. T. N. Johnston, Edinburgh, Mr. James Parsons, London, and Mr. James Chumley, Edinburgh. Other appointments will be made later in the season. Sir Robert Menzies, who has taken a great interest in these investigations, and has placed boats, &c., at Sir John Murray's disposal for carrying on the work, has said that all Highland proprietors should render any assistance in their power to the survey by offering the use of boats. It is intended to include within the scope of the survey, in addition to the systematic physical and biological investigations, observations regarding the oscillations in the level of the water (phenomena called "seiches" by Prof. Forel) by means of self-registering "limnographs," which will be set up on the shores of the larger lakes. The first limnograph is now in process of construction in Geneva under the personal supervision of Prof. Ed. Sarasin, of Geneva. It will be remembered that Mr. Laurence Pullar, of Bridge of Allan, has set aside funds to aid in carrying out this survey, as a memorial to his son, the late Mr. Fred. P. Pullar, who was engaged (in collaboration with Sir John Murray) in a systematic survey of the Scottish lakes at the time of his accidental death in February of last year.

MR. J. HUTCHINSON, F.R.S., went to South Africa recently to study the local diffusion of leprosy there. The *Times* announces that he has now returned; and the conclusion to which he has arrived is that the primary cause of the disease is the use as food of badly-cured salt-fish. Whilst believing that this has been by far the chief agent in its diffusion, Mr. Hutchinson thinks he has obtained conclusive evidence that the malady may, in very exceptional circumstances, be communicated from person to person. He does not believe that it is either infectious or contagious in the proper sense of these words, but that it may be communicated by eating food contaminated by a leper's hands. The measures suggested for the prevention of the disease are, first (and by far the most important), the legislative control of the fish-curing establishments; secondly, the diffusion of information as to danger of communication; and thirdly, the establishment of small isolation homes into which lepers should be induced to go during the stage involving risk.

It is stated that Prof. E. von Behring intends to give the amount of the Nobel prize recently awarded him (8400*l.*) to the Prussian State for the permanent endowment of the Institute of

Experimental Therapeutics founded by him in the University of Marburg. The gift is to be devoted to the prosecution on a large scale of the researches on serum initiated by Prof. Behring. The *British Medical Journal* appropriately recalls the fact that several years ago Prof. von Behring gave the half of a French prize awarded to him, equivalent to a sum of 1000*l.*, in furtherance of serum research.

A NEW city branch of the Imperial Institute will be opened early in May for the display, to merchants, manufacturers, &c., of raw and manufactured products received, from time to time, from the colonies and from India, and for which it is desired to find openings in the British markets. Curators and other members of the Imperial Institute staff will attend at the office at stated times and by special appointment, to deal with inquiries and to assist in establishing or facilitating business relations with mercantile houses, &c., in the colonies and in India. The city branch will be in constant communication, by telephone and messengers, with the Imperial Institute, South Kensington.

EARLY in April, students of the Institution of Electrical Engineers will visit the Newcastle-on-Tyne district and inspect several works there. Among the places to be visited are the works and substations of the Newcastle Electric Supply Co. and of the Sunbeam Electric Lamp Co., the Elswick Works of Sir W. G. Armstrong, Whitworth and Co., the three-phase tramway system at Stockton-on-Tees, and the works of Messrs. Palmer's Shipbuilding and Iron Co.

WE are informed that at the meeting of the Connecticut Academy of Sciences on February 12, Prof. A. E. Verrill exhibited several remarkable photographs in natural colours taken direct from nature by a new process, just invented by Mr. A. Hyatt Verrill, of New Haven. One of these was a Bermuda landscape, in which the beautiful blue and green tints of the water, as well as the soft, creamy colour of the old stone Walsingham residence and the natural grey of the rocks, were well brought out. Three other plates were copies of water-colour drawings of groups of bright-coloured Bermuda fishes, taken from life by Mr. Verrill. The photographs were on paper, and were said to have been obtained by a purely photochemical process.

THE report of the council of the Scottish Meteorological Society, read at the general meeting of the Society on March 20, announces that the second volume of the Ben Nevis observations is approaching completion. This is the first of the three volumes, for the printing of which the Royal Societies of London and Edinburgh have each voted 500*l.* It contains the observations made at the Ben Nevis and Fort William Observatories from January 1888 to December 1892, and discussions connected with them. One of these discussions is by Mr. J. Aitken, F.R.S., on the dust of the atmosphere as observed on Ben Nevis and at various places in Scotland. For several years experiments with kites for meteorological purposes have been carried on near Edinburgh by Mr. John Anderson. He has now obtained a complete outfit, including an oil-engine of two and a quarter (2¼) horse-power. It is proposed to test this kite, which in some respects has new features to recommend it, very thoroughly in the early summer. The outfit will be handed over to the ship of the Scottish Antarctic Expedition for use in the South Polar regions.

WE have received a reprint of a letter from Prof. A. Agassiz to Prof. E. S. Dana, dated Colombo, January 29, in which Prof. Agassiz announces the return of his expedition from an exploration of the Maldives, extending over several weeks. The general form of the plateau on which the atolls are situated has been determined and the channels between the lagoons carefully studied. The principal atolls in the middle of the group

are separated by shallow water, but towards the south the depths increase to nearly a thousand fathoms. Atolls are found in all stages of formation, including specimens of greater simplicity than have been found anywhere except on the Yucatan plateau. A preliminary report of the work will be issued as soon as the charts are completed.

In a paper published by the Amsterdam Academy of Sciences, Prof. Eugene Dubois discusses the supply of sodium and chlorine by rivers to the sea. A large number of analyses of river-water are dealt with, and Prof. Dubois arrives at the conclusion that Sir John Murray's estimate of the amount of sodium delivered by rivers is much too high. The point is of special interest in relation to the attempts of Prof. Joly and others to estimate the age of the earth from chemical denudation. Prof. Dubois' results seem to indicate a period of the same order as that obtained by Lord Kelvin—twenty-four millions of years.

Mr. J. BARCLAY, Birmingham, asks for an explanation of an effect he has observed, produced by refraction of air. While looking at a bookcase through the heated air rising from the chimney of a lighted lamp, the line of sight being a few inches above the top of the chimney, he noticed that one of the volumes appeared to project in front of the row in which it stood. Mr. E. Edser, to whom the observation has been referred, writes in reply:—"The illusion is obviously due to the refraction of light by a cylindrical column of heated air, which acts as a divergent cylindrical lens. The refractive index of the air of the room may be taken, roughly, as equal to 1.0003. If the heated air rising from the chimney of the lamp has a temperature of 300° C., its refractive index would, roughly, be equal to 1.00015. At the interface between the cold and heated air, the effective refractive index would be equal to 0.99985. Assuming the lamp chimney (and therefore the column of heated air) to have a diameter of 1 inch, then the focal length of the cylindrical lens would be 0.00015. The distance of the book from the lamp was about 8 feet, or (say) 100 inches. Seen through the column of heated air, the distance v of the book from the lamp is given by the equation $1/v - 1/100 = 0.00015$, from which v is found to be 99 inches. The book thus appears about an inch in front of its true position, as observed by Mr. Barclay."

We congratulate our Norwegian contemporary, *Naturen*, on having completed the first quarter of a century of its struggle for existence in a country of only two and a quarter millions of inhabitants. It is published in Bergen, where it was founded in 1877 by Dr. Hans Reusch, then an assistant in the Geological Survey of Norway, of which he is now director. In spite of many difficulties, *Naturen* gradually gained ground at a time when old and excellent journals such as *Tidsskrift for populære fremstillinger* and *Naturen og mennesket* (both published in Denmark) were discontinued. In 1881 Dr. Reusch went abroad for some years and handed over *Naturen* to Herr Carl Kraft, who conducted it on the same lines and against the same difficulties until 1886. In January 1887 the journal became the property of the Museum in Bergen, which continued its publication under the editorship of its director, Dr. I. Brunchorst, and in 1893 it received a yearly Government grant of Kr. 1000 (= 55*l.* 10*s.* 3*d.*), on condition that 400 copies are supplied monthly at half price to State schools and public libraries, so that poorly paid teachers and others in remote districts may have access to its pages. In its first number for 1902, in which it celebrates the commencement of the twenty-sixth year of its existence, we are presented with the portraits of its first two editors. The number also contains articles by the three contributors to its first number in 1877, viz. Dr. H. Reusch, Herr I. Sparre Schneider and Prof. Geelmuyden. We wish the journal a long and prosperous life.

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IN a lecture lately delivered before the Norwegian Geographical Society by Captain R. Amundsen, the author gave an account of the proposed exploring expedition to the magnetic North Pole. Captain Amundsen was first officer of the *Belgica*, which sailed for the Antarctic in August 1897 with the view of determining the exact locality of the magnetic South Pole, and it was while that ship lay fixed in the drift-ice west of Graham Land that the idea was conceived of exploring the magnetic North Pole. For the contemplated expedition, the *Gjøa*, one of the strongest and best sailing-vessels of the Arctic fleet, has been purchased at Tromsø. In 1831, Sir James Clark Ross reached a position where the dipping-needle was only deflected one minute from an absolutely vertical position, but the question has been raised whether the magnetic pole is actually only a point or whether the peculiarity of the needle assuming a vertical position extends over a large area, and, further, whether the magnetic pole changes its position. With the object of solving these two questions, Captain Amundsen will sail in the spring of 1903. The *Gjøa* is to be fitted with a petroleum engine and will carry a crew of seven men. A travelling magnetometer is under construction at the Deutsche Seewarte, and will resemble that used on board the *Fram*. A dipping-needle is being constructed in London, and will be examined at the observatory of the National Physical Laboratory. It is proposed to take magnetic observations as frequently as practicable, to leave the ship either at Matty Island or King William Land, and as soon as the severest part of the winter is over to continue the journey with the sledges to the place on Boothia reached by Ross.

WE have received a copy of Mr. C. E. Stromeyer's paper on explosions of steam pipes due to water-hammers, read before the Manchester Literary and Philosophical Society. The paper deals both with the causes of these explosions and with the forces which come into play when they occur. At the meeting Mr. Stromeyer made two sets of experiments with water in glass pipes. The first illustrated those accidents which are caused when the steam pipes are so arranged that water may find a lodgment over the boiler stop valve. When opening this valve, the steam pressure shoots the plug of water along the pipe until it strikes and shatters the engine stop valve, if this happens to be left partly open. The other experiment showed that if near the boiler stop valve there is an L pipe in which water can lodge while steam is in the main pipe above the vertical leg, then by draining away this water, which has, of course, to be done before starting the engine, steam is admitted to the horizontal leg and most violent steam-hammer blows occur, which have been the cause of many explosions. In the theoretical part of the paper, Mr. Stromeyer gives a proof that the velocity of a pressure wave is the same as the velocity of sound, which has an important bearing as showing that both undulatory and angular sound waves travel with the same speed. Then as regards the pressure exerted by an elastic body like water when it suddenly comes to rest, he explained that a pressure wave travels from the front end of the water column to the back end, and that the back end, or in fact any part of the water column, continues to move forward with its original velocity as long as it does not feel the wave of pressure. The arrested (pressed) water column is, therefore, shorter than the moving one. The ratio of the amount of shortening to total length is the ratio of original velocity (V) of the whole column to the pressure velocity (W). By multiplying this ratio by the elasticity of water (E) we get the pressure $P = E \frac{V}{W}$. Thus a plug of water only 6 inches long propelled through a distance of only 2 feet under a pressure of 15 pounds would on being suddenly arrested exert a pressure of 6400 pounds.

OUR contemporary the *Electrical Review* of New York celebrated on February 15 the twentieth anniversary of its publication. The greater part of a special issue is devoted to retrospective articles on the development of the different branches of the industry during the past twenty years. A facsimile reproduction of the first page of the first number shows that the original title of the journal was the *New York Review of the Telegraph and Telephone*, which sufficiently indicates the position of electrical engineering at that time. In 1882 the incandescent lamp was only just developed to a practical article; towards the end of the year the first central generating station was opened by Mr. Edison in New York. The first attempts at electric traction were just being made, and industrial electrochemistry had not advanced further than electroplating and a little copper refining. It has become, perhaps, hackneyed to remark on the rapid development of electrical engineering, but it is pleasant to be reminded occasionally in so striking a fashion how very great the rapidity has been. One of the most interesting features of the issue under consideration is the reproduction of engravings from early numbers showing some of the first commercial machines, and the comparison of these with the process blocks of the enormous engines and dynamos now in use. Altogether we can congratulate the paper on a very attractive and instructive number.

OWING to recent excavations in Hull, a large number of seventeenth century tobacco pipes have been discovered; these have been figured and described by Mr. T. Sheppard, the curator of the Hull Museum, in one of the useful penny guides, to another of which, on an ancient model of a boat, we drew attention a short time ago. This handbook will prove of value, as little is known about early clay pipes and their makers.

IN the thirty-fifth report on the Peabody Museum of American Archaeology and Ethnology of Harvard University, we have a very satisfactory record of the research and field work accomplished during the year 1900-01. There were seven expeditions during that period to various parts of North and Central America for the purpose of studying languages, customs and archaeology, and one graduate has done some valuable work in Syria. The collections have increased so greatly that the existing museum accommodation is quite inadequate; doubtless this will soon be remedied, as wealthy Americans are always ready to help deserving institutions that do their best.

WE have often drawn attention to the valuable *Bulletins* of the Madras Government Museum, and the current number (vol. iv. No. 2) fully sustains the reputation of the series. Mr. Edgar Thurston demonstrates an unexpected occurrence of brachycephaly among certain Dravidian tribes in the Bellary district of the Madras Presidency, where 37.8 per cent. (among 419 subjects examined) have a cephalic index of above 80, the average being 78.9 as opposed to an average index of 73.8 in the southern districts of the Presidency. We are pleased to find that Mr. Thurston will now study this problem. Mr. T. Ranga Rao is the author of an interesting paper on the Yánádis of the Nellore district (see p. 437), which was written as a thesis for the M.A. degree examination of the Madras University; in this recognition of ethnology the Madras University is in advance of those in the mother country. Among the "Miscellanea" are notes on the couvade, albinos, earth-eating, weighing beams, and other matters of interest pertaining to the ethnology of southern India.

No. 6 of the *Sitzungsberichte* of the Vienna Academy for 1902 contains an abstract of the third part of Franz Baron Nopcsa's work on the dinosaurian remains from Siebenburgen. This fasciculus is devoted to the description of the skull of the iguanodont known as *Mochlodon*, and also of dermal plates described

under the name of *Onychosaurus*. In a second communication the author discusses certain European Cretaceous armoured dinosaurs, such as *Struthiosaurus*, *Acanthopholis* and *Polarcanthus*, which he believes to be closely related to the remarkable horned *Ceratopsidae* of North America.

IT is most satisfactory to learn, from an article contributed to the March number of the *Zoologist* by Mr. John Gurney, that spoonbills are making the mud-flats of Breydon Broad, Norfolk, their regular summer resort, from two to four of these beautiful birds having frequented this locality from the early part of April till the end of July. An avocet was also seen there on one occasion. These gratifying results are entirely due to protection; but Mr. Gurney adds that "unless the Breydon Wild Birds' Protection Society receives more pecuniary support than it has had in the past, it will be unable to continue to carry on its good work." In a rich county like Norfolk there ought to be no difficulty in obtaining the necessary funds. Out of the fifteen Spanish bustards turned down near Thetford in 1900, only two pairs remain, and these wandered on one occasion nearly as far as Newmarket. Among rare birds recorded in Norfolk during the past year, Mr. Gurney mentions the golden oriole, orange-legged hobby, woodchat, roller, Tengmalm's owl and Caspian tern.

IN his address to the thirteenth annual meeting of the Association of Economic Entomologists, held at Denver, Colorado, in August last (of which a report appears in *Bulletin* No. 31 of the Entomological Division of the U.S. Department of Agriculture), Mr. G. P. Gillette took for his subject the life-history of the codling-moth. One of his objects was to show the imperfection in our knowledge of the history of even the most common insects; and since, next to the "two-lined locust," the codling-moth is the species which occasions the greatest loss to cultivators in Colorado, the importance of a full knowledge of its habits can scarcely be overrated. Until quite recently, entomologists held the belief that the moth lays its eggs in the calyxes of apples; the fruit-growers knew this to be an error, and in consequence have, unfortunately, somewhat lost confidence in the work of the Division. A special subject of investigation has been the number of broods annually produced by this insect. In Colorado, where the species is definitely known to be double-brooded, the habits of the moth are probably very different from those in the more eastern districts, and one of the main objects was to determine whether in the warmer parts of the country, where more tender fruits are grown, the annual number of broods might not be greater.

MESSRS. BLACKIE AND SON contemplate a re-issue of Kerner's "Natural History of Plants," a work which in its English form is identified with the name of Prof. F. W. Oliver. The new edition, which will be issued at a considerably reduced price, will be substantially a reprint of the original English edition, with a few necessary alterations and corrections.

THE "Class List and Index of the Periodical Publications in the Patent Office Library," lately published by the Patent Office (Bibliographical Series, No. 5), is a well-arranged catalogue of journals, reports and other periodical publications of interest to students of pure and applied science. The reports of scientific and polytechnic societies and the scientific and technical journals are subdivided locally; they are also classified according to subjects. There are in the list 2563 works, distributed under 356 classes and representing about 39,680 volumes.

Two catalogues of scientific apparatus which have recently been received show that the needs of teachers and investigators of physical science are well supplied by instrument makers. One

of the catalogues shows apparatus made by Messrs. J. J. Griffin and Sons for the purposes of instruction in sound, light and heat in schools and colleges. Among the new and ingenious devices contained in the catalogue we notice simple apparatus for the determination of the coefficient of linear expansion, the determination of relative conductivities, and a model theodolite. To make the catalogue of permanent use in the laboratory, tables are given of physical constants frequently required, and of logarithms, anti-logarithms and trigonometrical functions. The new catalogue of physical and electrical apparatus made by the Cambridge Scientific Instrument Company contains many instruments of precision not found in the lists of other instrument makers. For instance, a comparator and cathetometer combined, which can be used in a vertical or horizontal instrument, is described in the catalogue, and also geometric tripod stands, which can be so arranged as to form a stand of any desired height. Both these appliances were designed by Prof. C. V. Boys, and have not been illustrated previously. Other noteworthy instruments are a chronograph for laboratory use and the "Cambridge" standard coils, which are wound with bare platinum silver wire round a stout mica frame supported by a brass carrier. The coils are contained in a glass case with an ebonite top and are immersed in insulating oil. This arrangement ensures the coil being at the true indicated temperature, as there is no lagging due to paraffin wax or silk covering.

THE additions to the Zoological Society's Gardens during the past week include a Wedge-tailed Eagle (*Aquila audax*) from Australia, presented by Mr. Aubrey Richardson; two Spotted Turtle Doves (*Turtur suratensis*), a Barred Dove (*Geopelia striata*) from India, presented by Mr. L. Ingham Baker; a Common Bluebird (*Sialia wilsoni*) from North America, presented by Miss L. B. Dyar; five Prjevalsky's Horses (*Equus prjevalskii*) from Northern Mongolia, an Egyptian Jerboa (*Dipus aegypticus*) from North Africa, a Raven (*Corvus corax*), a Lapwing (*Vanellus vulgaris*), European, a Red-fronted Amazon (*Chrysotis vittata*) from Porto Rico, a Lesser Sulphur-crested Cockatoo (*Cacatua sulphurea*) from Moluccas, two Californian Quails (*Callipepla californica*) from California, five Yellow-winged Sugar-birds (*Coereba cyanea*), three Brazilian Tortoises (*Testudo tabulata*) from South America, a Long-necked Chelodine (*Chelodina longicollis*), a Bearded Lizard (*Amphibolurus barbatus*), a Gould's Monitor (*Varanus gouldi*), a Lace Monitor (*Varanus varius*) from Australia, twenty-four sharp-headed Lizards (*Lacerta dugesi*) from Madeira, deposited.

OUR ASTRONOMICAL COLUMN.

ASTRONOMICAL OCCURRENCES IN APRIL.

- April 2. 4h. Saturn in conjunction with moon. Saturn $5^{\circ} 15' S.$
 3. 9h. Jupiter in conjunction with moon. Jupiter $5^{\circ} 53' S.$
 4. 8h. 46m. Minimum of Algol (β Persei).
 8. Sun eclipsed, invisible at Greenwich.
 9. 15h. 51m. to 20h. 35m. Transit of Jupiter's Sat. IV.
 10. Saturn. Outer minor axis of outer ring = $13''.96$.
 10. 16h. Ceres in conjunction with moon (Ceres $0^{\circ} 23' N.$).
 11. 9h. 36m. to 10h. 15m. Moon occults δ^3 Tauri (mag. 4.2).
 12. 11h. 23m. to 12h. 11m. Moon occults $\iota 19$ Tauri (mag. 4.6).
 14. 12h. 36m. to 13h. 9m. Moon occults 68 Geminorum (mag. 5.0).
 15. Venus. Illuminated portion of disc = 0.435 , of Mars = 1.000 .
 15. 11h. 47m. to 12h. 17m. Moon occults 27 Cancri (mag. 5.6).
 21. 11h. 46m. to 12h. 52m. Moon occults α Virginis (mag. 1.2).

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22. 5h. 0m. to 8h. 45m. Moon eclipsed, partly visible at Greenwich. Moon rises at 7h. 5m. totally eclipsed.
 23. 12h. Mercury in conjunction with Mars. Mercury $0^{\circ} 40' S.$
 23. 12h. 30m. to 16h. 12m. Transit of Jupiter's Sat. III.
 24. 10h. 28m. Minimum of Algol (β Persei).
 25. 10h. 53m. to 12h. 7m. Moon occults B.A.C. 5580 (mag. 5.7).
 25. 12h. Venus at greatest elongation, $46^{\circ} 12' W.$
 26. 10h. 51m. to 15h. 40m. Transit of Jupiter's Sat. IV.
 28. 16h. 20m. to 17h. 44m. Moon occults ρ^1 Sagittarii (mag. 3.9).
 29. 14h. Saturn in conjunction with moon. Saturn $5^{\circ} 20' S.$

ORIGIN OF DISTURBANCE IN CORONA, MAY 17-18, 1901.—*Bulletin* No. 18 from the Lick Observatory is devoted to the discussion of more detailed examination of the photographs obtained during the total solar eclipse in Sumatra, which showed evidence of a marked disturbance in a certain region of the corona. A set of positives on glass from solar negatives taken at Dehra Dûn, India, for the Solar Physics Committee, have since been received from the Astronomer Royal, giving exact records of the solar surface on May 17, 18, 19, 20, 21, 22, 26 and 28, 1901. The photographs of May 17 and 18 show no evidence of spots or other active features, but that for May 19 shows a medium-sized spot just passed into view round the east limb. On the 20th, this is seen to be followed by a group of smaller spots, surrounded on all sides except the west by a large area of faculae. This group of small spots shows conspicuous changes from day to day.

The positions of the spot on the plates of May 19 and 28 were measured, and from the reduced values its probable position on the day of eclipse was computed. It would be on the opposite side within 4° of the limb. The position angles of the spot as projected on the limb and the apex of the coronal disturbance are practically identical. As, moreover, both the sunspot and the coronal disturbance appear to have had the same latitude, it can hardly be doubted that this unusual appearance in the corona was in reality immediately above the group of sunspots and faculae, and that it had its origin in the same disturbance of the solar surface. In view of this conclusion, an attempt was made to determine if any measurable displacement of any of the coronal masses had occurred during the interval of about five minutes, but no certain indication of such motion could be detected. In this connection, however, the interval of one and a half hours between the times of eclipse in Mauritius and Padang should render a comparison of the negatives secured at the two stations valuable.

FOUCAULT'S PENDULUM.—An interesting announcement is made in the March number of the *Bulletin de la Société Astronomique de France* to the effect that a movement is being started among the astronomical authorities in Paris to arrange for the repetition of Foucault's famous experiment at the Panthéon, which was interrupted in 1851. No definite arrangements are yet settled, but it is hoped this majestic demonstration of the rotational movement of the earth will be successfully installed with all the advantages of modern refinements in instrumental construction.

A CONVENIENT TERMINOLOGY FOR THE VARIOUS STAGES OF THE MALARIA PARASITE.¹

I HAVE found it necessary in labelling a series of models of the malaria parasite in the Central Hall of the Natural History Museum to use as simple and clear a terminology as possible. I think that this terminology will be found useful by others who are perplexed by such terms as "sporozoites," "blasts," "ookinetes," "schizonts," "amphionts" and "sporonts"—terms which have their place in schemes dealing with the general morphology and life-history of the group Sporozoa, but are not, as experience shows, well suited for immediate use in describing and referring to the stages of the malaria parasite.

It is necessary to treat the malaria parasite from the point of view of malaria; that is to say, to consider its significant phases

¹ By Prof. E. R. Lankester, F.R.S. Read before the Royal Society on March 6.